

In the Specification

Please replace the Abstract with the following Replacement Abstract.

A process for modeling numerical data for forecasting a phenomenon from a data set including collecting data for development of a model with a data acquisition module, relates to constructing a model by processing the data to enhance its exploitability in a data preparation module, constructing a model by processing and learning on collected the processed data, in a modeling module, The evaluating the fit and robustness of the obtained model are evaluated and in a performance analysis module, adjusting the model parameters are adjusted to select the an optimal model in an optimization module, wherein the model is generated in the form of a D^{th} order polynomial, of the variables used in input of the modeling module, by controlling the Λ trade-off between the learning accuracy and the learning stability is controlled by with the addition to the adding to a covariance matrix of a perturbation during calculation of the model in the form of the product of a scalar λ times a matrix H or in the form of a matrix H dependent on a vector of k parameters $\Lambda = (\lambda_1, \lambda_2, \dots, \lambda_k)$, where the order D of the polynomial and the scalar λ , or the vector of parameters Λ , are determined automatically during model adjustment by the optimization module by integrating an additional Λ data partition step performed by a partition module which consists in constructing two preferably disjoint subsets: can divide the data into a first subset comprising training data used as a learning base for constructing the model for the modeling module and a second subset comprising generalization data destined to adjust for adjusting the value of these the model parameters according to a model validity criterion obtained from on data that was not used to construct the model, did not participate in the training, and where the matrix H is a positive defined matrix of dimensions equal to the number p of input variables into the modeling module, plus one.